



31 / Appeal  
Brief  
9-30-03  
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In the United States Patent and Trademark Office  
Before the Board of Patent Appeals and Interference

June 12, 2003

*Appl. No.* : 08/653,425  
*Title* : *Computer Mouse*  
*Filed* : *May. 24, 1996*  
*Examiner* : *Liang, Regina M*  
*Art Unit* : 2674

## Appeal Brief

### Real Party in Interest

The subject application is owned by David Darian Muresan and David Muresan of Seattle, Washington.

### Related Appeals and Interferences

There are no related appeals and interferences.

### Status of Claims

On May 23, 2003, appellant filed a notice of appeal for the final rejection (dated March 24, 2003) of claim 1. This brief is the appeal brief for the final rejection of claim 1.

### Status of Amendments

There are no amendments filed subsequent to final rejection.

## **Summary of Invention**

Appellant's invention comprises of a method of making a computer mouse where the rubber magnetic core ball has only two total contacts with the body of the mouse. One contact is with the X shaft and the second contact is with the Y shaft of the mouse. There is no third contact with the body of the mouse.

Appellant's method of making this mouse is by using a magnet placed in a key location between the X and Y shafts, such that the magnet pulls the rubber magnetic core ball against the X and Y shafts, thus removing the need for the third wheel. As described in the appellant's patent application on page 4 and in Fig. 2, the magnet is placed diagonally across from the would be location of the free roller.

## **Issues**

Claim 1 was rejected under 35 U.S.C. 102(e) as being anticipated by Solhjell (US. PAT. No. 5,696,537). Claim 1 was rejected under 35 U.S.C. 102(e) on the grounds that "Solhjell discloses a computer mouse having a magnetic core ball (64 in Fig. 11), [and] a third contact (the free rolling 18 as shown in Fig. 5) is replaced with a magnet (66 in Fig. 11) ..."

The issue is whether any modifications taught by Solhjell describe the complete removal of the third contact with the ball, and therefore whether Solhjell describes a mouse in which the mouse ball has only two contacts (namely the X and Y rollers) with the body of the mouse. More specifically, the issue is whether Solhjell's patent teaches the complete removal of the free wheel and not only a modification of the free wheel, or a replacement (substitution) of the free wheel with a modified wheel or pad.

The main issue revolves around Solhjell's description of Fig. 11. The examiner claims that the description of Fig. 11 in Solhjell's patent teaches the replacement of the free wheel with the magnet which is positioned exactly as in our patent (diagonally across from the would be location of the free wheel), and which would therefore remove the need for a third contact between the mouse and the ball.

## **Grouping of Claims**

Appellant's invention comprises of only one claim.

## **The Examiner's Rationale**

The examiner's rationale for rejecting claim 1 as anticipated by Solhjell was stated as follows in her final rejection:

"... Solhjell teaches modifying the free roller to adjust the force applied to the ball, thus by this modification Solhjell clearly teaches replacement or substitution of the third wheel which is the free roller with anyone of the embodiments shown in Figs. 6-11."

Further, she states:

"Fig. 11 is one embodiment showing a modification to the free roller using a magnetic pad instead of the conventional contact free roller to adjust the force applied to the ball."

Finally she concludes:

"Therefore, applying Solhjell's teaching of modifying the free roller to provide means for adjusting the force applied to the ball, such as using the magnetic pad of Fig. 11, it will leave a mouse that normally has three wheels with only two wheels, namely the X- and Y- contacts." The examiner continues on by saying "the free roller is modified to comprise a friction pad (Fig. 6), magnetic pad (Fig. 11), etc. all of which clearly show that the third wheel normally associated with a free roller is replaced!"

## Argument

Solhjell's invention is concerned with controlling the rolling force of the ball in a mouse device. As suggested in the abstract this can be achieved by using "a friction pad or magnetic force [...] applied to the ball to change and adjust the ball rolling force," or by controlling "a free roller in contact with the ball" by having "its rotational force adjustable by friction or magnetic forces acting on the free roller or its axle."

In the patent described by Solhjell only Figs. 7, 8, 9, and 10 refer to a modification of the free rollers (and not Figs. 6 and 11, as the examiner suggested) in order to control the rolling force. This can be seen from the abstract where the author makes a clear distinction between directly controlling the rolling force, using a friction pad or magnetic force, and modifying the free roller in order to control the rolling force. In the cases of Figs. 7, 8, 9, and 10 there is a third contact between the ball and the body of the mouse. The two figures that do not represent a direct modification of a free roller are Figs. 6 and 11 which, as stated in the abstract, represent "a friction pad or a magnetic force [which] may be applied to the ball to change and adjust the ball rolling force." The case of Fig. 6 is not of interest to us since the existence of the pad provides a third contact with the ball. The main issue with the patent of Solhjell revolves around the description of Fig. 11. The examiner claims that the description of Fig. 11 in Solhjell's patent teaches the replacement of the free wheel with the magnet which is positioned exactly as in our patent (diagonally across from the would be location of the free wheel), and which would therefore remove the need for a third contact between the mouse and the ball.

It is our argument that Solhjell's patent does not teach (explicitly or implicitly) every aspect of our claimed invention, as it is required under 35 U.S.C. 102, which is the basis of the examiner's final rejection.

First, at no time does Solhjell's patent explicitly mentions the replacement of the free wheel or the removal of the third contact between the mouse and the ball. More specifically, there is no explicit discussion of the replacement of the free wheel in the description of Fig. 11.

Second, there is no implicit mentioning of the removal of the free wheel. Our argument goes as follows. Solhjell's patent is concerned with controlling the rolling force of the ball. However, controlling the rolling force does not mean that the third wheel is replaced. The rolling force and the third wheel are not mutually exclusive. In fact, the way Solhjell describes his patent, the third wheel is necessary at all times. Here is why:

In the beginning of Solhjell's patent, page 4, column 2, line 62 he states:

"It is an object of this invention to make it easier to adapt the mouse to the particular need of an operator by making it possible to adjust the rolling force of the ball (both for type 1 and type 2 mice)." Where the type 1 mouse is the same as our mouse and type 2 is a tracking ball mouse. After this statement there is no more differentiation between the type 1 and type 2 mice. In other words, the implication is that from that point onward his description of "controlling the rolling force" applies equally to both types of mice.

Next, we present a proof by contradiction. Assume for a moment that in Fig. 11 Solhjell's patent describes a situation where the ball is in contact with only two points of the mouse (the X and Y rollers) and that there is no third contact between the ball and the mouse. If this is the case, since Solhjell's description applies to both types of mice equally, Solhjell describes a procedure in which a type 2 mouse (a track-ball) would have contact with only the X and Y rollers and there would be no third contact with any other part of the track-ball. Clearly this is not possible! In a track-ball device, the ball will always be in contact with at least three points of the mouse. By contradiction, this means that in Fig. 11 Solhjell could not have described a mouse in which the ball is in contact with only the X and Y rollers.

Third, one should also consider that the removal of the free roller is a major accomplishment, and the discussion cannot be ignored by the inventor due to the special problems it raises, namely the precise location of the magnet with respect to the X and Y rollers and the implications of removing a free wheel in a type 2 mouse (a track-ball).

Finally, considering the above three arguments: 1) there is no explicit mention of the removal of the free roller, 2) there is no implicit argument of the removal of the free

roller, and 3) there is no discussion about the implications of the removal of the free roller (as it would be necessary), we believe that the reviewer has made an error in rejecting our claim based on 35 U.S.C. 102(e).

### Summary

For the foregoing reasons, appellant believes that the examiner's rejections of claim 1 was erroneous, and reversal of her decision is respectfully requested.

Respectfully submitted,

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David Darian Muresan and David Muresan

## Appendix

We claim:

1. A computer mouse characterized by using a magnet, to pull the rubber magnetic core ball against the coordinates X and Y shafts only; and

there is no third, or any other contact between the ball and any other part of the mouse, especially no third contact between the ball and another wheel (Fig. 2).